

**AQA, OCR, Edexcel**

# GCSE Science

## GCSE Biology

Uses Of Monoclonal Antibodies  
Answers

Name:

**M M E**

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Total Marks: /17

Q1: Explain why scientists are developing ways to use monoclonal antibodies in the treatment of cancer.

A= Very specific target

(1 mark)

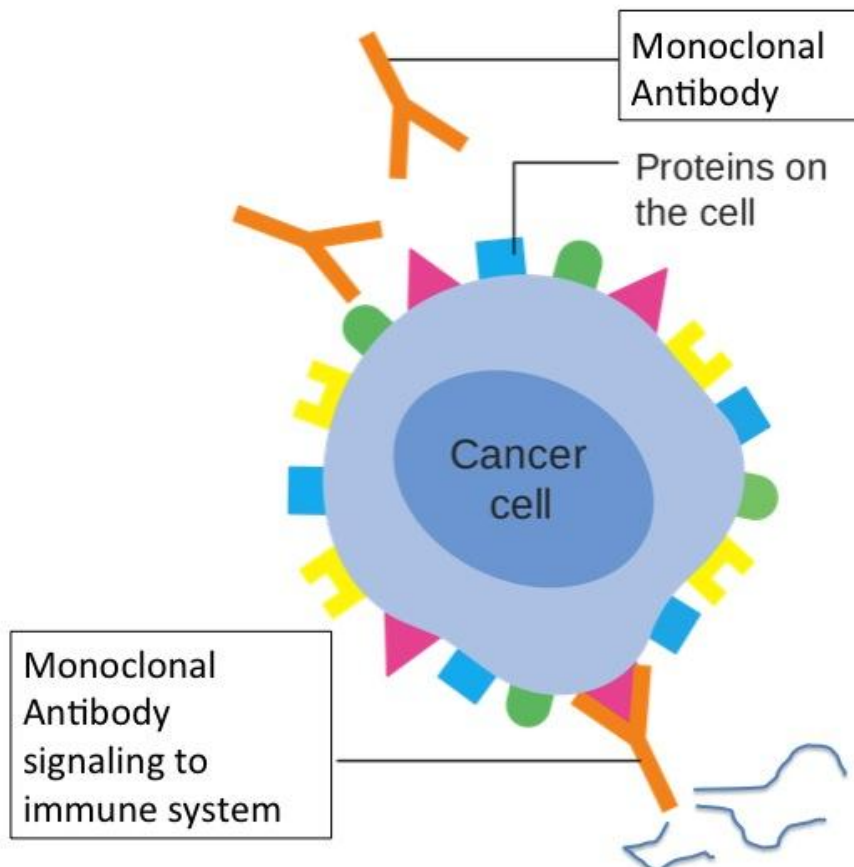
Q2: Give 3 ways monoclonal antibodies can be used to treat cancers

A= 1 mark for each use/ 1 mark for each description of how work.

- Direct use – trigger immune system (2)
- Block receptors – Stops growth and division (2)
- Carry drugs / radiation – Stops cell growth (2)

(6 marks)

Q3: Using your knowledge of monoclonal antibodies, draw and label a cancer cell with a monoclonal antibody attached, signalling the immune system.



A= Marks awarded for:

- (1) Labels
- (1) Complementary shape
- (1) Indicating signal to immune system.

(3 marks)

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Q4: Explain the disadvantages of monoclonal antibodies.

A= Accept any 2 of the following:

- Expensive
- Created more side effects than expected
- Research delays

(2 marks)

Q5: What do scientists eventually hope monoclonal antibodies will one day become?

A= Magic bullet

(1 mark)

Q6: Explain why healthy cells are not affected when using radiation and monoclonal antibodies.

A= Accept any 2 of the following:

- Specific target
- Can't bind to none targeted cell
- Incorrect antigens (non-complementary shapes)

(2 marks)

Q7: Why are conventional cancer drugs considered poor when treating cancers?

A= Accept any 2 of the following:

- Not specific
- High side effects
- Damage healthy cells too.

(2 marks)